

Remarks

This application has been carefully considered in light of the Advisory Action dated February 18, 2004. Entry of the amendments and reconsideration of this application are respectfully requested. Claims 1-65 remain pending in this application.

A Terminal Disclaimer is being filed concurrently with this RCE application and Preliminary Amendment. As indicated in the Office Action of October 18, 2004, the Terminal Disclaimer overcomes the obvious-type double-patenting rejection of claims 1-65 of the present application as set forth in the Final Office Action, dated October 18, 2004, with respect to claims 1-34 of application no. 09/407, 212, filed concurrently with the parent application in the present case, now US Pat. No. 6,587,938. Withdrawal of this rejection is thus respectfully requested.

By this Preliminary Amendment, claim 1 has been amended to recite: “A method of managing workload of a computing environment.....said managing comprising dynamically *redistributing* allocation of a shareable resource of at least one partition of said two or more partitions, so as to effectuate achievement of workload goals of said two or more partitions.” In similar fashion, independent claims 13, 22, 34, 43-45, 57, and the dependent claims have been amended. This amendment clarifies that the method of managing workload in accordance with the applicants’ invention involves redistributing shareable resources across partitions of the computing environment. This redistribution of shareable resources is done to effectuate achievement of workload goals. The term “redistributing” clarifies that the invention provides a shifting of resource allocation based on workload. Support for this amendment is found in the specification, e.g., on page 15, lines 1-27; in the paragraph coupling pages 19 and 20; in the paragraph coupling pages 26 and 27; and on page 30, lines 16-20. No new matter has been added.

In the Final Rejection of October 18, 2004, and as maintained in the Advisory Action of February 18, 2005, claims 1-65 were rejected over Matsuura (US Pat. No. 5,530,860) in view of Maeurer et al. (US Pat. No. 5,301,323). The applicants respectfully traverse this rejection as follows.

Particularly as recited in the amended claims set forth hereinabove, the applicants’ invention is directed to managing a workload of a computing environment by dynamically

redistributing shareable resources across partitions of the computing environment. As explained in the specification on pages 3-4 and 10-12, for example, a partition is a system image capable of operating as if it was a separate computer system, e.g., a logical partition. In a previous amendment, i.e., Amendment A dated June 19, 2003, the applicants clarified the term “partition” by amending independent claims 1, 22, 43 and 45 to recite that a partition has one or more central processors allocated thereto. Further, claims 13, 34, 44 and 57 were amended to indicate that the partition is a logical partition. In accordance with the applicants’ invention, as particularly recited in the amended claims, to manage the workload across partitions, shareable resources are dynamically redistributed across the partitions. The resources include, for instance, CPU resources, logical processor resources, I/O resources, co-processors, channel resources, network adapters and memory resources.

Matsuura teaches a virtual computer control system that assigns CPU resources to a plurality of virtual computers using predetermined, fixed assignment ratios. In fact, not only are Matsuura’s predetermined assignment ratios fixed, but they are exactly maintained. [See, for example, Matsuura, column 4, lines 45-51] Matsuura does not teach or suggest any type of process, dynamic or otherwise, for changing these assignment ratios.

In contrast, the applicants’ invention, particularly as recited in the amended claims set forth hereinabove, is directed to managing shareable resources in a computing environment by dynamically redistributing the shareable resources across partitions so as to effectuate achievement of workload goals of the partitions. Thus, Matsuura’s fixed allocation of CPU resources is not only in direct contrast to the applicant’s invention, but actually teaches away from it. In fact, the Office Action agrees that Matsuura describes a fixed allocation of CPU resources assigned to virtual computers.

Maurer et al. do not correct the deficiency of Matsuura with respect to dynamic redistribution of shareable resources across partitions to effectuate achievement of workload goals of the partitions, as recited by the applicants in their amended claims, for the following reasons.

Maeurer et al. describe a data processing system using a channel path management program. Maeurer’s channel path management program monitors subchannel and I/O device utilization statistics, and makes changes in the channel path configuration based thereon. The

applicants agree that Maeurer et al. describe a dynamic process. However, the mere fact that both the applicants and Maeurer et al. describe dynamic processes in computing environments does not cure the deficiency of Matsuura, nor does it render obvious the applicants' dynamic process.

In particular, Maeurer et al. describe a dynamic process for changing a channel path configuration based on channel path utilization statistics. The applicants, on the other hand, describe a method for managing shareable resources of partitions in a computing environment by redistributing allocation of the shareable resources across partitions to effectuate achievement of workload goals of the partitions. In effect, in one aspect, the applicants' invention involves shifting resources across partitions to enable each partition to achieve its workload goals. This is very different from Maeurer et al. who do not redistribute, or shift, shareable resources across partitions of a computing environment. Indeed, Maeurer et al. reconfigure a channel path configuration. The applicants respectfully submit that Maeurer's reconfiguring of a channel path configuration based on utilization thereof is a very different process from the applicants' shifting, or redistributing, allocation of shareable resources across partitions in a computing environment to effectuate achievement of workload goals of the partitions.

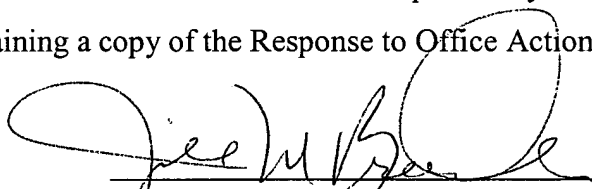
Further to the sharp distinction between Maeurer's reconfiguration of a channel path configuration and the applicants' redistribution of shareable resources across partitions in a computing environment to effectuate achievement of the workload goals of the respective partitions, the applicants refer to the structural definition of a channel path configuration given by Maeurer et al., e.g., in column 1, lines 40-43. That is, Maeurer et al. state: "The connections between the channel subsystem and the control units are referred to as channel paths. The channel paths may extend through and be routed by switches." Thus, as argued previously by the applicants, a channel path is not a partition. Moreover, a dynamic process for channel path reconfiguration, as described by Maeurer et al., is very different from a dynamic process for redistributing allocation of shareable resources across partitions, as recited by the applicants in their amended claims, as set forth hereinabove.

With respect to the suggested combination of Matsuura and Maeurer et al., Matsuura describes assigning predetermined, fixed CPU assignment ratios to virtual computers; and Maeurer et al. describe dynamically reconfiguring a channel path configuration. The applicants

respectfully submit that it is not possible, as suggested, to apply the dynamic nature of Maeurer et al. to the fixed process of Matsuura. This would totally vitiate Matsuura's invention and would furthermore not render obvious the applicants' invention, as recited.

Therefore, the applicants believe that claims 1-65, particularly as amended, are patentable over the suggested combination of Matsuura and Maeurer et al. for all the reasons set forth hereinabove. Reconsideration and a Notice of Allowability for amended claims 1-65 are thus respectfully requested.

Should the Examiner have any further concerns regarding this application, he is invited to contact applicants' representative at the below listed number. As requested by the Examiner, enclosed herewith is a diskette containing a copy of the Response to Office Action.



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